

COMMONWEALTH OF PENNSYLVANIA

Department of Environmental Protection
Hazardous Sites Cleanup Program

Benner Township PFAS Investigation Site

Benner Township, Centre County

STATEMENT OF DECISION

The Commonwealth of Pennsylvania, Department of Environmental Protection (DEP) files this statement of the basis and purpose of its decision in accordance with Section 506(e) of the Pennsylvania Hazardous Sites Cleanup Act (“HSCA”), Act of October 18, 1988, P.L. 756 No. 108, 35 P.S. § 6020.506(e). This filing is in response to DEP’s May 11, 2022 Combined Response Justification Document/Analysis of Alternatives for Prompt-Interim Response (“RJD/AOA”), and incorporates the oral and written comments received during the public comment period along with subsequent clarifications to Applicable or Relevant and Appropriate Requirements (ARARs).

DEP has selected a prompt interim response, the combination of Alternative 3 and Alternative 4 as outlined in the RJD/AOA (“Selected Response”), consisting of provision of bottled drinking water followed by installation of Point-of-Entry Treatment (“POET”) Systems on private residential water supplies. Residential water supplies in the investigation area with concentrations of perfluorooctane sulfonic acid (“PFOS”) and perfluorooctanoic acid (“PFOA”) exceeding the current PA Land Recycling and Environmental Remediation Standards Act, 35 P.S. § 6026.101 *et seq.* (“Act 2”), Statewide health Medium-Specific Concentration (“MSC”) of 70 parts per trillion (ppt) published in 2021 are the focus of this Selected Response. Long term exposure to PFOA and PFOS may lead to adverse health effects in humans, particularly through ingestion. Bottled drinking water is being provided to impacted property owners until installation of the POET systems is completed. Following implementation of this prompt interim response, a final response will be determined as the investigation proceeds. Final response alternatives to be evaluated will include extension of the public water line into the impacted residential neighborhood and the continued use of the POET systems which were installed as part of the prompt interim response.

I. SITE INFORMATION

A. Site Location and Description

1. The Site is located primarily in Benner Township, Centre County although the HSCA investigation also includes properties located in adjacent College and Patton Townships (“Investigation Area”).
2. The Site includes both commercial and residential properties located in the Investigation Area where water supply wells are the source of drinking water.
3. Benner Township, Centre County, PA encompasses an area approximately 28.5 square miles with a population of approximately 9,000 residents. It is part of the State College, PA Metropolitan Statistical Area.

4. Land use in Benner Township includes residential, commercial and industrial properties. The University Park Airport (“Airport”), operated by Pennsylvania State University, is located in Benner Township and is a focus of the investigation.
5. Surface water in and around Benner Township is used for recreational purposes.
6. The Investigation Area is within the Nittany Valley of the Valley and Ridge physiographic province on the north edge of the Gatesburg anticline. The geologic strike and bedrock dip enhance the general groundwater flow toward the northeast. A 2001 water table elevation map provided by the State College Borough Water Authority indicates groundwater flow direction to the northeast. Sinkholes and fracture traces are common in the Investigation Area.
7. While public water is available in some areas of Benner Township, it is not available to all properties in the Township. Within the Investigation Area, both public water and groundwater wells are used for drinking water sources.

B. Site History

1. PFOA and PFOS were first detected above the Act 2 Statewide health MSC of 70 ppt in groundwater in Benner Township in the water supply well serving a business within a small industrial park located across Fox Hill Road from the Airport.
2. The Airport has historically conducted Federal Aviation Administration mandated testing of Aqueous Film-Forming Foam (“AFFF”), which is a fire suppressant typically used to extinguish flammable liquid fires. AFFF discharge testing has reportedly occurred at several locations north of the runway. AFFF is known to contain PFOA and PFOS. Records from several industries and entities within the investigation area have been requested to determine additional potential uses of PFOA, PFOS, or other per-and polyfluoroalkyl substances (“PFAS”) compounds.
3. A groundwater plume containing the PFAS compounds PFOA and PFOS has been detected in the area including the Airport, along High Tech Road where several small industries are located, and in a residential area located immediately south of the Airport. Delineation of the extent of contamination is yet to be determined as part of the groundwater investigation.
4. In addition to investigation of the groundwater underlying the Investigation Area, surface and subsurface soil samples have been collected from a number of properties where PFOA and PFOS may have been used or discharged. Additional soil sampling, as well as the installation of groundwater monitoring wells, are planned as part of the ongoing investigation. Spring water samples have also been collected to aid in any surface water investigation.
5. Due to use of groundwater as a source of drinking water for many residential as well as commercial properties in the HSCA Investigation Area, defining the impacts of the groundwater contamination on private water supply wells is the initial primary focus of the investigation. Locating source areas through soil sampling and analysis and fully defining the extent of groundwater impacts will be a long-term focus, along with potential impacts to surface water, which is used for recreational purposes.

C. Release of Contaminants

The compounds identified above are considered “contaminants” as that term is defined by Section 103 of HSCA, 35 P.S. § 6021.103, and Section 9601 of the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S. Code § 9601.

Health effects associated with long-term exposure to these chemicals may include developmental delays, decreased function of the liver, damage to the immune system and increased risk of certain cancers.

PFAS are man-made chemicals and are not found naturally in the environment. Of the PFAS chemicals, PFOA and PFOS have been the most extensively produced and studied. They have been used to make cookware, carpets, clothing, fabrics for furniture, paper packaging for food, and other materials that are resistant to water, grease or stains. They are also used in firefighting foams and in a number of industrial processes.

II. RESPONSE CATEGORY

The selected prompt interim response was justified for this Site due to the immediate need for alternate drinking water sources for residential properties impacted by the PFOA and PFOS contamination. The provision of bottled drinking water and installation of POET systems is anticipated to cost less than \$2 million and take less than 1 year to implement. A prompt interim response was initiated to allow the response to begin prior to development and closure of the Administrative Record along with closure of the public comment period.

III. CLEANUP STANDARDS

The Selected Response is not a final remedial response pursuant to Section 504 of HSCA, 35 P.S. § 6020.504, and therefore DEP is not required to meet the cleanup standards which apply to final remedial responses.

Additional response actions may be needed to achieve a complete and final cleanup for the Site.

IV. APPLICABLE, OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)

The following standards, requirements, criteria, or limitations are legally applicable, or relevant and appropriate under the circumstances presented by the Site.

A. ARARs

Pennsylvania Hazardous Sites Cleanup Act (“HSCA”), Act of October 18, 1988, P.L. 756 No. 108, 35 P.S. § 6020.506(e):

- Gives DEP the authority to perform investigations, initiate cleanups, provide replacements for contaminated water supplies, and issue orders protecting the response action
- Establishes a fund to cover the costs of such activities
- Provides administrative procedures for conducting response actions
- Defines a “contaminant” as any substance defined as such by the CERCLA

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S. Code § 9601 *et seq.* (“CERCLA”):

- Defines a “contaminant” as any element, substance, compound, or mixture, which when released to the environment and upon ingestion, may reasonably be anticipated to cause disease, cancer and other harm to humans and other organisms

PA Land Recycling and Environmental Remediation Standards Act, 35 P.S. § 6026.101 *et seq.* (“Act 2”) and the Chapter 250, Administration of Land Recycling Program, 25 Pa. Code § 250.1 *et seq.* (“Land Recycling Regulations”):

- Provide procedures to develop Statewide health MSCs for regulated substances
- Provide remedial standards to be considered as applicable, relevant and appropriate requirements under CERCLA and HSCA

Section 106 of Act 2, 35 P.S. § 6026.106, states that environmental remediation standards established under that Statute shall be applicable to remediation conducted under HSCA. This Site will be remediated to the current Act 2 Statewide health MSC of 70 ppt as an established standard for drinking water. The concentrations may change if new Maximum Contaminant Levels (“MCLs”) are published by EPA or DEP, or if other cleanup standards are developed in accordance with the Land Recycling Regulations. DEP maintains discretion under HSCA to select remedies that meet any one or a combination of cleanup standards under Act 2.

A Statewide health standard (SHS) may be applied to contaminants of concern based upon post-remediation sample analysis. Under the SHS, the Land Recycling Regulations establish a list of cleanup levels for specific contaminants in specific media. The Statewide health MSCs are the concentrations of contaminants in soil or groundwater for residential and non-residential exposures that shall be met to demonstrate attainment of the SHS as provided in the Land Recycling Regulations. The SHS may be met by using treatment and removal technologies, which is the method chosen for this Selected Response.

Pennsylvania Safe Drinking Water Act, Act of May 1, 1984, P.L. 206, No. 43, *as amended*, 35 P.S. §§ 721.1 *et seq.*, and the regulations promulgated thereunder at 25 Pa. Code Chapter 109.

- Establishes a state program to oversee the provision of safe drinking water to the public.
- Sets forth drinking water quality standards and provides requirements for public water systems, including permit design, construction, source quality, and siting requirements.

Uniform Environmental Covenants Act, Act of December 18, 2007, P.L. 450, No. 68, 27 Pa. C.S. §§ 6501 *et seq.* (“UECA”), and the regulations promulgated thereunder at 25 Pa. Code Chapter 253.

- Provides a standardized process for creating, documenting and assuring the enforceability of activity and use limitations on contaminated sites.
- Requires an environmental covenant whenever an engineering or institutional control is used to demonstrate the attainment of an Act 2 remediation standard for any cleanup conducted under an applicable Pennsylvania environmental law.

B. TO BE CONSIDERED

In addition to the ARARs listed above, the following documents are relevant to the response actions being proposed herein, though they do not create any statutory or regulatory obligations.

Standard Operating Procedure for the Hazardous Sites Cleanup Program, Bureau of Environmental Cleanup and Brownfields, Division of Site Remediation, 2022.

Guidance for Commonwealth-Funded Water Supply Response Actions, November 21, 2015, Department of Environmental Protection, Bureau of Environmental Cleanup and Brownfields, document number 262-5800-001.

- Outlines implementation of Commonwealth-funded water supply responses, including procedures for providing temporary or permanent response actions for impacted private water supplies.
- Details specific work related to response actions that may be financed via the HSCA fund.
- Explains operation and maintenance duties of response actions, including the appropriate parties that should conduct such activities.
- Describes the use of institutional controls as part of the response action process.

EPA has issued Health Advisory Levels for certain PFAS and is in the process of developing MCLs under the Safe Drinking Water Act (“SDWA”) (42 U.S.C. §300f et seq.) for PFOA and PFOS. Furthermore, DEP has proposed MCLs for PFOA and PFOS, which are To-Be-Considered criteria (“TBCs”) for purposes of selecting response actions at the Site. These proposed MCLs may be promulgated in the near future. The response action is expected to achieve protection with respect to all unacceptable human health risks posed by PFAS constituents. DEP will consider DEP or Federal MCLs or Health Advisory Levels for PFAS constituents as ARARs or TBCs, respectively, as appropriate, when one or more of these standards is promulgated or finalized.

V. ANALYSIS OF ALTERNATIVES

Alternative 1. No Action

The no further action alternative serves as a baseline to compare against other proposed response action options. Under this alternative, DEP would conduct no further remedial action and would not continue providing bottled water or POET systems to the impacted homes.

Compliance with ARARs

This alternative would not comply with ARARs and would not eliminate the ingestion exposure pathway for PFOA and PFOS above the current Act 2 MSC.

This alternative would be feasible and implementable because no action is being taken but would not be effective in addressing the health threats to the public.

Cost Effectiveness

This alternative would incur no cost.

Alternative 2. Provide Information for Homeowners to Install Treatment

Under this alternative, DEP would provide residents with information on treatment systems and a list of contractors who could install them. It would be the responsibility of the homeowner to have a treatment system installed at the residence.

Compliance with ARARs

This alternative may or may not comply with ARARS or eliminate the ingestion exposure pathway for PFOA and PFOS above the current Act 2 MSC as DEP would not have control over the type of system installed, or the contractor installing it. Nor would DEP be assured that all impacted residents would install POET systems.

Cost Effectiveness

This alternative would incur no initial cost for DEP, however retesting of homes may be required to determine if concentrations of PFAS have increased and become more of a threat to human health. Cost of installation and maintenance of the POETs could cause a financial hardship for property owners.

Alternative 3. Provide Bottled Drinking Water for Consumptive Use- with Restrictions on the Use of Groundwater

Under this alternative, DEP would continue to supply bottled water to the residential properties at the Site that have untreated privately-owned potable wells with concentrations of PFOA and PFOS above the Act 2 MSC. Bottled water would be supplied for the duration of DEP's ongoing investigation.

DEP would also continue to sample residential properties in the surrounding area during its ongoing investigation of the Site. If necessary, bottled water would be provided to any additional residence with concentrations of PFOA and PFOS exceeding the Act 2 MSC.

If this alternative is selected as a final response, then pursuant to Section 512 of HSCA, 35 P.S. § 6020.512, and Section 6517 (a)(2) of UECA, 27 Pa.C.S. § 6517(a)(2), DEP would ensure that future property owners are aware of the contamination and that future exposure to PFOA and PFOS at any property is eliminated by requiring that a limitation on groundwater usage be included in an environmental covenant recorded at the local recorder of deeds. An Administrative Order under Section 512 of HSCA could be issued to enforce deed restrictions in instances when DEP is unable to secure a signed covenant under UECA.

Compliance with ARARs

While this alternative does comply with ARARs, PFAS-contaminated water is still entering the homes and being used for non-consumptive purposes. It does however provide temporary safe drinking water for residents until such time as a POET system can be installed. This alternative can be initially implemented with minimal delay but may be difficult to implement in times of inclement weather.

Cost Effectiveness

This alternative incurs a modest to moderate cost to DEP of approximately \$130 per month per household depending upon how long bottled water is supplied prior to the installation of a POET system or another permanent alternate water supply can be provided. This alternative is cost effective, however it is not a permanent solution.

Alternative 4. POET System Installation and Maintenance with Restrictions on the Use of Groundwater

Under this alternative, DEP would provide POET systems for whole-home treatment until such time as permanent alternate water sources are evaluated and implemented. These systems would be placed in residences at the Site that have untreated privately owned potable wells with concentrations of PFOA and PFOS above the current Act 2 MSC.

DEP would sample the systems to determine if the filters are operating properly. DEP would continue to monitor and maintain the systems for the duration of its ongoing investigation to ensure they are effectively removing the PFOA and PFOS from the water supplies. If this alternative is selected as DEP's final response, then the responsibility for maintaining the systems would be turned over to the homeowners.

DEP would also continue to sample residential properties in the surrounding area during its ongoing investigation of the Site. If necessary, additional POET systems would be installed on any additional residence with concentrations of PFOA and PFOS exceeding the Act 2 MSC.

If this alternative is selected as a final response, then pursuant to Section 512 of HSCA, 35 P.S. § 6020.512, and Section 6517 (a)(2) of UECA, 27 Pa.C.S. § 6517(a)(2), DEP would ensure that future property owners are aware of the contamination and that future exposure to PFOA and PFOS at any property is eliminated by requiring that a limitation on groundwater usage be included in an environmental covenant recorded at the local recorder of deeds. An Administrative Order under Section 512 of HSCA could be issued to enforce deed restrictions in instances when DEP is unable to secure a signed covenant under UECA.

Compliance with ARARs

Once implemented, this alternative would comply with ARARs as DEP would be assured that PFAS concentrations are being mitigated by a properly installed POET system. It would effectively eliminate the exposure pathway and, as a result, eliminate exposure to concentrations of PFOA and PFOS in the groundwater above the Act 2 MSC. While meeting the ARAR, this alternative as a stand-alone option would take some time to implement because treatment systems would need to be designed and installed. Long-term effectiveness may vary depending upon proper maintenance of the system and replacement as necessary.

Cost Effectiveness

The costs associated with this alternative include installation and sampling and maintenance of POETs. The POETs will require periodic maintenance and sampling for the systems to continuously and effectively treat the water. Maintenance or issues related to the systems may arise, which DEP would cover during its ongoing investigation until a final remedy is selected. If this alternative were to be the final remedy, maintenance of the POET systems would be turned over to the property owners if the POET system was still required to provide potable water to the residence.

This alternative will incur initial costs to DEP of approximately \$5,000 per household however it will provide long-term protection of human health for the impacted residents. Two sampling events would be provided by DEP per year, at a cost of approximately \$5000 per system.

VI. SELECTED RESPONSE

DEP has determined, based upon the information contained in the document and the Administrative Record, that a prompt interim response action is justified at the Site in accordance with Section 505 (b) of HSCA, 35 P.S. § 6020.505(b).

DEP has selected a combination of Alternatives 3 and 4, Providing Bottled Drinking Water and POET System Installation and Maintenance, with Restrictions on the Use of Groundwater (Selected Response), as the prompt interim response at the Benner Township PFAS Site. The Selected Response is effective in mitigating threats to public health and is cost effective.

The Selected Response provides more immediate protection for residents than Alternatives 1 and 2 by supplying a source of water for consumptive purposes immediately, while allowing for continued investigation of the Site. Bottled water is being supplied to any home that contains PFOA and/or PFOS concentrations of 70 ppt or greater in the water supply well and does not have effective treatment already in place. The installation of POET systems will mitigate drinking water exposure until a final remedy can be selected and completed.

The Selected Remedy provides flexibility so that additional systems may be installed if subsequent sampling identifies properties where concentrations of PFOA and PFOS in the residential privately owned potable wells exceed the Act 2 MSC or if new standards are promulgated or are authorized under Section 503 (e) of HSCA 35 P.S. § 6020.504(e).

DEP will continue to monitor the concentrations of PFOA and PFOS at the properties where the systems are installed as part of its ongoing investigation of the Site. If this alternative is selected as a final response, then pursuant to Section 512 of HSCA, 35 P.S. § 6020.512, and Section 6517 (a)(2), DEP would ensure that future property owners are aware of the contamination and that future exposure to PFOS and PFOA at any property is eliminated by requiring that a limitation on groundwater usage be included in an environmental covenant recorded at the local recorder of deeds. An Administrative Order under Section 512 of HSCA could be issued to enforce deed restrictions in instances when DEP is unable to secure a signed covenant. Final Response alternatives to be evaluated will include the continued use of the POET systems and the extension and hookup of public water to impacted residential users.

VII. RESPONSE TO PUBLIC COMMENTS

DEP's response to public comments concerning the selection of this response action is filed in the Administrative Record.

FOR THE COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Jared Dressler, Acting Regional Director

October 12, 2022

Date